

## Remarks/Argument

### ***Claim Summary***

Claims 1-37 remain pending in the application.

Claims 12-20, 22 and 24-37 have been withdrawn from consideration.

However, since dependent claims 12-13 and 15-17 depend directly or indirectly from claim 1, it is understood that these dependent claims would be allowed upon the eventual allowance of claim 1.

### ***35 U.S.C. §102 and §103***

Claims 1-11, 21 and 23 are currently subject to examination, and stand rejected as follows:

<i>Claim(s)</i>	<i>Rejection</i>	<i>Reference(s)</i>
1, 3, 6-7 and 9-11	§102	Campbell et al. (US 4990229)
1, 3, 7-8 and 10	§102	Maeda et al. (EP 0676793 A2)
1, 2 and 10	§102	Boswell (US 4810935)
2 and 8	§103	Campbell et al. in view of Yokota (JP 7-153594)
4-5	§103	Campbell et al. in view of Takagi (US 5681393) or Ishii et al. (US 5529657)
21 and 23	§103	Campbell et al. in view of Wicker et al. (US 5863376)
2	§103	Maeda et al. in view of Yokota
4-5	§103	Maeda et al. in view of Takagi or Ishii et al.
6, 9 and 11	§103	Maeda et al. in view of Campbell et al.

21 and 23	§103	Maeda et al. in view of Wicker et al.
3 and 8	§103	Boswell in view of Yokota
4-5	§103	Boswell in view of Takagi
6-7, 9 and 11	§103	Boswell in view of Campbell et al.
21 and 23	§103	Boswell in view of Wicker et al.

Applicants respectfully traverse each of the rejections identified in the table presented above.

Claims 1-3 and 6-11 were variously rejected under 35 U.S.C. §102 as being anticipated by Campbell et al. (US 4990229), and/or Maeda et al. (EP 0676793), and/or Boswell (US 4810935), for the reasons stated at pages 3-5 of the Office Action. In each of these rejections, the Examiner relies on the following unsubstantiated statement:

“It should be noted that attenuation of the ions which diffuse into the second chamber and approach the workpiece, by directing a proportion of the ions to a loss surface of either chamber will be produced.”

The Examiner’s attention is directed to the following passages from M.P.E.P. §2112:

“The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957

(Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'"

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art."

The rejections of record are entirely devoid any basis in fact and/or technical reasoning to support that Examiner apparent contention that the subject limitation of the present claims is somehow inherent in the cited references.

Rather, relying on alleged similarities with Applicant's own disclosure, the Examiner simply contends that "one of ordinary skill in the art ... **would have expected** attenuation of the ions by the magnetic field production device 8 of the apparatus of the Campbell et al. reference."

The “would-have-expected” standard adopted by the Examiner falls far short of the “necessarily flows” requirement long-mandated by the Patent Office and federal case law.

Further, Applicants have submitted **evidence** in the record which demonstrates that the subject limitations of the claims are not inherent in the cited references, namely, the DECLARATION OF DR. LESLIE LEA UNDER 37 C.F.R. ¶1.132 (“the Lea Declaration”) already of record.

As described at paragraph 4 of the Lea Declaration, each of Campbell et al., Maeda et al., and Boswell describe helicon type plasma sources which aim to increase the efficiency of energy transfer from the RF power supply to the plasma, i.e., to increase plasma (ion and electron) density.

As noted in Applicant’s previous responses, Helicon type plasma sources such as those of the cited references achieve a result which is **opposite** to that attributed by the Examiner.

At page 15 of the Office Action, the Examiner discusses the Lea Declaration by abandoning the previous assertions of inherency and dismissing the subject limitations of claim 1 as “*mere intended use*” – and thus the Examiner seems to say that the subject limitations of claim 1 are entitled no patentable weight. This position of the Examiner is clearly erroneous.

Claim 1 recites in part:

**the magnetic field production device** is positioned to act on the first chamber, is located either adjacent to the first chamber or between the first and second chambers and is **constructed to cause attenuation of the ions which diffuse into the second chamber and approach the workpiece, by directing a proportion of the ions to a loss surface of either chamber.**

Claim 1 does **not** recite a mere intended use, and instead clearly recites a magnetic field production device constructed to cause attention of ions as claimed. The cited references are devoid of a magnetic field production device constructed in such a manner, and for at least this reasons, Applicants respectfully traverse the rejections under 35 U.S.C. §102.

Several of the dependent claims were variously rejected under 35 U.S.C. §103 as being unpatentable over Campbell et al. or Maeda et al. or Boswell, in combination with various secondary references cited by the Examiner at pages 6-14 of the Office Action. However, Applicants respectfully traverse these rejections for at least the same reasons as stated above in connection the rejections under 35 U.S.C. §102.

### ***Conclusion***

No other issues remaining, reconsideration and favorable action upon the present claims are requested.

Respectfully submitted,  
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